Journal of Neurosurgery

July 1985, Volume 63, Number 1

EDITORIAL COMMENT 1

REVIEW ARTICLE: **Applications of monoclonal antibodies in the diagnosis and treatment of primary brain tumors.** DENNIS E. BULLARD, and DARELL D. BIGNER 2

CLINICAL ARTICLES:

Loss of auditory function in microvascular decompression for hemifacial spasm. Results in 143 consecutive cases. MARGARETA B. MØLLER, and AAGE R. MØLLER 17

Cerebral revascularization to a main limb of the middle cerebral artery in the Sylvian fissure. An alternative approach to conventional anastomosis. FERNANDO G. DIAZ, FELIX UMANSKY, BHARAT MEHTA, SALVADOR MONTOYA, MANUEL DUJOVNY, JAMES I. AUSMAN, and JOSE CABEZUDO 21

Delayed onset of traumatic extradural hematoma. BERNARDO BOROVICH, JACOB BRAUN, JOSEPH N. GUILBURD, MENASHE ZAAROOR, MICHEL MICHICH, LION LEVY, ANSHEL LEMBERGER, IAN GRUSHKIEWICZ, MOSHE FEINSOD, and I. SCHÄCHTER 30

The pathogenesis of acromegaly. Clinical and immunocytochemical analysis in 75 patients. EDWARD R. LAWS, JR., BERND W. SCHEITHAUER, SANDRA CARPENTER, RAYMOND V. RANDALL, and CHARLES F. ABBOUD 35

Pituitary enlargement mimicking pituitary tumor. LARISSA T. BILANIUK, THOMAS MOSHANG, JOSE CARA, MARTIN Z. WEINGARTEN, LESLIE N. SUTTON, LEWIS R. SAMUEL, and ROBERT A. ZIMMERMAN 39

CLINICAL RESEARCH:

Effect of mannitol on cerebral blood flow and cerebral perfusion pressure in human head injury. A. DAVID MENDELOW, GRAHAM M. TEASDALE, THOMAS RUSSELL, JOHN FLOOD, JAMES PATTERSON, and GORDON D. MURRAY 43

Incidence of multiple intracranial aneurysms. Influence of arterial hypertension and gender. JOHN R. ØSTERGAARD, and ESBEN HØG 49

Human neonatal hydrocephalus. An electron microscopic study of the periventricular tissue. MARC R. DEL BIGIO, J. EDWARD BRUNI, and H. DEREK FEWER 56

Brain specific gravity and CT scan density measurements after human head injury. ROSS BULLOCK, ROGER SMITH, JEAN FAVIER, MICHAEL DU TREVOU, and GORDON BLAKE 64

Biomechanical and hydrodynamic characterization of the hydrocephalic infant. KENNETH SHAPIRO, ARNO FRIED, and ANTHONY MARMAROU 69

LABORATORY INVESTIGATIONS:

Effect of the skull and dura on neural axis pressure-volume relationships and CSF hydrodynamics. KENNETH SHAPIRO, ARNO FRIED, FUTOSHI TAKEI, and IRA KOHN 76

Experimental feline hydrocephalus. The role of biomechanical changes in ventricular enlargement in cats. KENNETH SHAPIRO, FUTOSHI TAKEI, ARNO FRIED, and IRA KOHN 82

Acute changes in regional cerebral metabolite values following experimental blunt head trauma. KENNETH R. WAGNER, PATRICIA A. TORNHEIM, and MARY K. EICHHOLD 88

Concussive head injury producing suppression of sensory transmission within the lumbar spinal cord in cats. YOICHI KATAYAMA, JAMES D. GLISSON, DONALD P. BECKER, and RONALD L. HAYES 97

Changes in contralateral brain-stem auditory evoked responses to cerebellopontine angle compression in rats. ROSARIO A. ZAPPULLA, ZHONG ZHI WANG, LEONARD I. MALIS, and BERNARD Z. KARMEL 106

Suprasellar peri-infundibular ectopic adenohypophysis in fetal and adult brains. AKIRA HORI 113

Blood flow and autoregulation in rat pituitary gland. ANDRAS A. KEMENY, JAN A. JAKUBOWSKI, ANTHONY A. JEFFERSON, and EMIL PASZTOR 116

Reduction of blood flow in the adenohypophysis of rats by bromocriptine. ANDRAS A. KEMENY, JAN A. JAKUBOWSKI, EMIL PASZTOR, ANTHONY A. JEFFERSON, and RICHARD WOJCIKIEWICZ 120

CASE REPORTS AND TECHNICAL NOTE:

Intrathecal phenol and glycerin in metrizamide for treatment of intractable spasms in paraplegia. Case report. BRETT A. SCOTT, ZELIG WEINSTEIN, ROBERT CHITEMAN, and MORRIS W. PULLIAM 125

Nonsurgical treatment of subdural empyema. Case report. HENK W. MAUSER, ROBERT A. P. RAVIJST, ARTHUR ELDERSON, JAN VAN GIJN, and CEES A. F. TULLEKEN 128

Actinomycosis of the brain. Case report. HE CHEN-WEI 131

Unilateral subdural-peritoneal shunting for bilateral chronic subdural hematomas in infancy. Report of three cases. NOBUHIKO AOKI, HIROSHI MIZUTANI, and HIDEAKI MASUZAWA 134

Cavitron ultrasonic surgical aspirator and visual evoked potential monitoring for chiasmal gliomas in children. Report of two cases. A. LELAND ALBRIGHT, and ROBERT J. SCLABASSI 138

Bayonette curettes for anterior cervical spine procedures. Technical note. ALTON BROWN SISCO, TROY M. TIPPETT, and CHARLES E. CHAPLEAU 141

BOOK REVIEWS 142

NEUROSURGICAL FORUM: **Letters to the editor** 144

NOTICES 151

Journal of Neurosurgery

August 1985, Volume 63, Number 2

REVIEW ARTICLE: **Intracranial germ-cell tumors: natural history and pathogenesis.** MARK T. JENNINGS, REBECCA GELMAN, and FRED HOCHBERG 155

CLINICAL ARTICLES:

Preservation of hearing in patients undergoing excision of acoustic neuromas and other cerebellopontine angle tumors. CHARLES H. TATOR, and JULIAN M. NEDZELSKI 168

Management of acoustic neuromas, 1978–1983. STEPHEN G. HARNER, and MICHAEL J. EBERSOLD 175

Stenotic and occlusive disease of the venous drainage system of deep brain AVM's. FERNANDO VIÑUELA, LUIS NOMBELA, MARGOT R. ROACH, ALLAN J. FOX, and DAVID M. PELZ 180

Arteriovenous malformations of the lateral ventricle. SHIRO WAGA, SHINICHI SHIMOSAKA, and TADASHI KOJIMA 185

Successful management of an intracranial arteriovenous malformation by conventional irradiation. FRANCESCO TOGNETTI, ALVARO ANDREOLI, ANNA CUSCINI, and CLAUDIO TESTA 193

Post-decompression optic neuropathy. ROY W. BECK, and HARRY S. GREENBERG 196

Acute cerebral revascularization. FERNANDO G. DIAZ, JAMES I. AUSMAN, BHARAT MEHTA, MANUEL DUJOVNY, RAUL A. DE LOS REYES, JEFFREY PEARCE, and SURESH PATEL 200

Infratentorial arachnoid cysts. ERCOLE GALASSI, FRANCESCO TOGNETTI, FRANCO FRANK, LEO FAGIOLI, MARIA TERESA NASI, and GIULIO GAIST 210

CLINICAL RESEARCH:

Phase III comparison of BCNU and the combination of procarbazine, CCNU, and vincristine administered after radiotherapy with hydroxyurea for malignant gliomas. VICTOR A. LEVIN, WILLIAM M. WARA, RICHARD L. DAVIS, PAMELA VESTNYS, KENNETH J. RESSER, KATHLEEN YATSKO, STEPHEN NUTIK, PHILIP H. GUTIN, and CHARLES B. WILSON 218

Sensory and motor responses to deep brain stimulation. Correlation with anatomical structures. SHIMPEI NAMBA, TAKAO WANI, YOJI SHIMIZU, NORIAKI FUJIWARA, YOICHIRO NAMBA, SHIGEO NAKAMUA, and AKIRA NISHIMOTO 224

The lateral spinal artery of the upper cervical spinal cord. Anatomy, normal variations, and angiographic aspects. PIERRE LASJAUNIAS, BERNARD VALLEE, HERVÉ PERSON, KAREL TER BRUGGE, and MING CHIU 235

LABORATORY INVESTIGATIONS:

Intracranial pressure monitoring by flaccid-cuff catheter in an animal model. JIMMY D. MILLER, JOGI PATTISAPU, DUDLEY F. PEELER, and ANDREW D. PARENT 242

Effects of potassium channel-blocking agents on spontaneous discharges from neuromas in rats. KIM J. BURCHIEL, and LISA C. RUSSELL 246

Increase in rat spinal cord blood flow with the calcium channel blocker, nimodipine. AB GUHA, CHARLES H. TATOR, and IAN PIPER 250

Circulatory disturbance of the spinal cord with epidural neoplasm in rats. AMAMI KATO, YUKITAKA USHIO, TORU HAYAKAWA, KAZUO YAMADA, HIROYA IKEDA, and HEITARO MOGAMI 260

Perforating branches of the middle cerebral artery. Microsurgical anatomy of their extracerebral segments. SLOBODAN V. MARINKOVIĆ, MIROSLAV S. KOVAČEVIĆ, and JELENA M. MARINKOVIĆ 266

Recirculation model following MCA occlusion in rats. Cerebral blood flow, cerebrovascular permeability, and brain edema. TAKU SHIGENO, GRAHAM M. TEASDALE, JAMES MCCULLOCH, and DAVID I. GRAHAM 272

Cervical facetectomy and its effect on spine strength. RICHARD B. RAYNOR, JAMES PUGH, and ILAN SHAPIRO 278

CASE REPORTS AND TECHNICAL NOTE:

Diffuse form of primary leptomeningeal gliomatosis. Case report. MASAKAZU KITAHARA, RYUICHI KATAKURA, TOKUO WADA, TSUNEO NAMIKI, and JIRO SUZUKI 283

Pituitary apoplexy in an acromegalic patient during bromocriptine therapy. Case report. ANTOINE ALHAJJE, MICHEL LAMBERT, and JEAN CRABBÉ 288

Spontaneous hematomyelia secondary to Factor XI deficiency. Case report. JEFFREY H. WISOFF, RICHARD L. ROVIT, VICTOR HO, and HARVEY LEVENTHAL 293

Postoperative paraplegia with preserved intraoperative somatosensory evoked potentials. Case report. HOWARD H. GINSBURG, ANDREW G. SHETTER, and PETER A. RAUDZENS 296

Cerebral gumma. Case report. WEN-ZERN HWANG, TAKESHI HASEGAWA, HARUHIDE ITO, TAKASHI SHIMOJI, and SHINJIRO YAMAMOTO 301

A self-retaining multipore suction tube. Technical note. TOMOYUKI NISHIZAKI, and TOSHIMITSU WAKABAYASHI 304

BOOK REVIEWS 305

NEUROSURGICAL FORUM: **Letters to the editor** 310

NOTICES 311

Journal of Neurosurgery

September 1985, Volume 63, Number 3

HARRY WILKINS, 1904–1985. ALVIN RIX 315

CUSHING ORATION, 1985: From space exploration to utilization of the space perspective, environment, and materials. RAYMOND E. ARVIDSON 317

REVIEW ARTICLE: The pineal gland: anatomy, physiology, and clinical significance. STEPHANIE S. ERLICH, and MICHAEL L. J. APUZZO 321

CLINICAL ARTICLES:

Multiple intracranial aneurysms: determining the site of rupture. DANIEL G. NEHLS, RICHARD A. FLOM, L. PHILIP CARTER, and ROBERT F. SPETZLER 342

Subarachnoid hemorrhage of unknown origin: prognosis and prognostic factors. J. BRISMAR, and G. SUNDBÄRG 349

Acute hydrocephalus after aneurysmal subarachnoid hemorrhage. JAN VAN GIJN, ALBERT HIJDRA, EELCO F. M. WIJDICKS, MARINUS VERMEULEN, and HANS VAN CREVEL 355

CT myelography with intramedullary enhancement in cervical spondylosis. YOSHINOBU IWASAKI, HIROSHI ABE, TOYOHIKO ISU, and KAZUO MIYASAKA 363

Trilateral retinoblastoma: ocular and pineal retinoblastomas. DENNIS L. JOHNSON, ROMA CHANDRA, WINK S. FISHER, M. KATHRYN HAMMOCK, and CRAIG A. MCKEOWN 367

Surgical treatment for fungal infections in the central nervous system. RONALD F. YOUNG, G. GADE, and V. GRINNELL 371

Juvenile pilocytic astrocytoma of the cerebrum in adults. A distinctive neoplasm with favorable prognosis. DELIA M. GARCIA, and KEITH H. FULLING 382

Carotid endarterectomy. Review of 150 consecutive cases in two small community hospitals. TROY M. TIPPETT II, ALTON B. SISCO, and CHARLES E. CHAPLEAU 387

CLINICAL INVESTIGATIONS:

A Phase I trial of naloxone treatment in acute spinal cord injury. EUGENE S. FLAMM, WISE YOUNG, WILLIAM F. COLLINS, JOSEPH PIEPMEIER, GUY L. CLIFTON, and BOGUSLAV FISCHER 390

Pressure-volume conditions in patients with subarachnoid and/or intraventricular hemorrhage. MICHAEL KOSTELJANETZ 398

Fluid balance and secretion of antidiuretic hormone following transsphenoidal pituitary surgery. A preliminary series. STEPHEN J. WHITAKER, COLIN I. MEANOCK, GILLIAN F. TURNER, PATRICIA J. SMYTHE, JOHN D. PICKARD, ALAN R. NOBLE, and VALERIE WALKER 404

Use of intrathecal morphine for postoperative pain relief following lumbar spine surgery. PADRAIC O'NEILL, CHRISTINE KNICKENBERG, SENARATH BOGAHALANDA, and ANTHONY E. BOOTH 413

S-100 protein and calmodulin levels in cerebrospinal fluid after subarachnoid hemorrhage. M. TAKAYASU, M. SHIBUYA, M. KANAMORI, Y. SUZUKI, K. OGURA, N. KAGEYAMA, H. UMEKAWA, and H. HIDAKA 417

Morphological studies of human arteriovenous malformations. Effects of isobutyl 2-cyanoacrylate embolization. PETER M. KLARA, EUGENE D. GEORGE, DENNIS E. MCDONNELL, and PAUL H. PEVSNER 421

LABORATORY INVESTIGATIONS:

Stem cell studies of human malignant brain tumors. Part 2: Proliferation kinetics of brain-tumor cells *in vitro* in early-passage cultures. BERTRAND PERTUISET, DOLORES DOUGHERTY, CARLOS CROMEYER, TAKAO HOSHINO, MITCHEL BERGER, and MARK L. ROSENBLUM 426

Barrier disruption in the major cerebral arteries following experimental subarachnoid hemorrhage. TOMIO SASAKI, NEAL F. KASSELL, MASANORI YAMASHITA, SHIGERU FUJIWARA, and MARIO ZUCCARELLO 433

Beagle puppy model of perinatal cerebral infarction. Acute changes in cerebral blood flow and metabolism during hemorrhagic hypotension. LAURA R. MENT, WILLIAM B. STEWART, CHARLES C. DUNCAN, BRUCE R. PITT, ALDO RESCIGNO, and JUDY COLE 441

Vicryl (polyglactin 910) mesh as a dural substitute. PAUL KURT MAURER, and JOSEPH V. MCDONALD 448

CASE REPORTS:

Spinal intramedullary pseudocyst. Case report. KING-SHUN CHUANG, YEOU-CHIH WANG, SHIN-HAN TSAI, and MING YING LIU 453

Unusual delayed onset of diabetes insipidus following closed head trauma. Case report. MOSHE HADANI, GIDEON FINDLER, IZHAK SHAKED, and ABRAHAM SAHAR 456

Ventriculoperitoneal shunt malfunction during pregnancy. Case report. JUNYA HANAKITA, TAKANORI SUZUKI, YOSHISUKE YAMAMOTO, YUJI KINUTA, and KIYOSHI NISHIHARA 459

The human tail: a benign stigma. Case report. ROBERTO SPIEGELMANN, EDGARDO SCHINDER, MORDEJAI MINTZ, and ALEXANDER BLAKSTEIN 461

Extraneural metastasis of choriocarcinomatous element in pineal germ-cell tumor. Case report. KAZUNARI YOSHIDA, SHIGEO TOYA, MITSUHIRO OHTANI, SHUNICHI OKUI, NOBUO TAKENAKA, and KENICHI HARIGAYA 463

Fibrosis surrounding a silicone implant simulating recurrent orbital meningioma. Case report. ADNAN A. ABLA, JOSEPH C. MAROON, JOHN S. KENNERDELL, and ZIAD L. DEEB 467

Electron microscopic diagnosis of cerebral toxoplasmosis. Case report. LIZARDO CEREZO, MARCELINO ALVAREZ, and GEORGE PRICE 470

BOOK REVIEWS 473

NEUROSURGICAL FORUM: Letters to the editor 478

NOTICES 480

Journal of Neurosurgery

October 1985, Volume 63, Number 4

BARNES WOODHALL, M.D., 1905–1985. GUY L. ODOM 483

AANS PRESIDENTIAL ADDRESS, 1985: The need to trace our roots in difficult times. SIDNEY GOLDRING 485

CLINICAL ARTICLES:

Radical resection of intramedullary spinal cord tumors in adults. Recent experience in 29 patients. PAUL R. COOPER, and FRED EPSTEIN 492

Odontoid upward migration in rheumatoid arthritis. An analysis of 45 patients with "cranial settling." ARNOLD H. MENEZES, JOHN C. VANGILDER, CHARLES R. CLARK, and GEORGE EL-KHOURY 500

Evaluation of acute nonpenetrating cervical spinal cord injuries with CT metrizamide myelography. ROBERT L. ALLEN, PHANOR L. PEROT, JR., and STEVEN K. GUDEMAN 510

Results of extracranial-intracranial arterial bypass for bilateral carotid occlusion. MOHAMED EL-FIKI, NORMAN L. CHATER, and PHILIP R. WEINSTEIN 521

Skull metastasis of thyroid carcinoma. Study of 12 cases. YOSHIHIDE NAGAMINE, JIRO SUZUKI, RYUICH KATAKURA, TAKASHI YOSHIMOTO, NAOYA MATOBA, and KIYOSHI TAKAYA 526

Pneumocephalus in patients with CSF shunts. JOHN R. RUGE, LEONARD J. CERULLO, and DAVID G. MCLONE 532

CLINICAL INVESTIGATIONS:

Survival times and case fatality rates of brain-injured persons. JESS KRAUS, CAROL CONROY, PAMELA COX, KAREN RAMSTEIN, and DANIEL FIFE 537

Somatosensory evoked potentials evaluated in normal subjects and spinal cord-injured patients. ROBERT CHABOT, DONALD H. YORK, CLARK WATTS, and WENDY A. WAUGH 544

Safe use of PEEP in patients with severe head injury. KEVIN R. COOPER, PETER A. BOSWELL, and SUNG C. CHOI 552

Brain blood volume and blood flow in patients with plateau waves. MINORU HAYASHI, HIDENORI KOBAYASHI, YUJI HANDA, HIROKAZU KAWANO, and MASANORI KABUTO 556

Combined-modality treatment of osteogenic sarcoma of the skull. NARAYAN SUNDARESAN, ANDREW G. HUVOS, GERALD ROSEN, and JOSEPH H. GALICICH 562

Thymidine kinase in brain-tumor cysts. LENNART PERSSON, JÖRGEN BOETHIUS, J. SIMON GRONOWITZ, CLAES KÄLLANDER, and LARS LINDGREN 568

Source of fibrin/fibrinogen degradation products in the CSF after subarachnoid hemorrhage. MARINUS VERMEULEN, HUUB H. D. M. VAN VLIET, KENNETH W. LINDSAY, ALBERT HIJDRA, and JAN VAN GIJN 573

Clinical evaluation of two methods of subdural pressure monitoring. PHILIP BARLOW, A. DAVID MENDELOW, AUDREY E. LAWRENCE, MARION BARLOW, and JOHN O. ROWAN 578

LABORATORY INVESTIGATIONS:

ACNU-resistant mutants of 9L rat glioma cell line. Isolation and preliminary characterization of these subclones. TAKASHI KOKUNAI, NORIHIKO TAMAKI, and SATOSHI MATSUMOTO 583

Nimodipine levels in gerbil brain following parenteral drug administration. DAN S. HEFFEZ, THADDEUS S. NOWAK, JR., and JANET V. PASSONNEAU 589

Choroid plexus as a barrier to immunoglobulin delivery into cerebrospinal fluid. STEPHEN L. ALESHIRE, IVAN HAJDU, CHARLES A. BRADLEY, and FRITZ F. PARL 593

Deterioration of auditory evoked potentials during cerebellopontine angle manipulations. An interpretation based on an experimental model in dogs. TETSUJI SEKIYA, TAKASHI IWABUCHI, SHIGEKI KAMATA, and TAKASHI ISHIDA 598

The risk of cerebral damage during graded brain retractor pressure in the rat. JARL ROSENØRN, and NILS DIEMER 608

Peripheral nerve stimulation suppression of C-fiber evoked flexion reflex in rats. Part I: Parameters of continuous stimulation. BENGT H. SJÖLUND 612

Regional brain metabolite levels following mild experimental head injury in the cat. MILDRED S. YANG, DOUGLAS S. DEWITT, DONALD P. BECKER, and RONALD L. HAYES 617

CASE REPORTS:

Occipital artery to extradural vertebral artery bypass procedure. Case report. MARK N. HADLEY, ROBERT F. SPETZLER, ROBERTO MASFERRER, NEIL A. MARTIN, and L. PHILIP CARTER 622

Use of balloon occlusion and substances to protect ischemic brain during resection of posterior fossa AVM. Case report. JIRO SUZUKI, AKIRA TAKAHASHI, TAKASHI YOSHIMOTO, and HIROBUMI SEKI 626

Accessory nerve palsy following carotid endarterectomy. Report of two cases. K. W. SWANN, and R. C. HEROS 630

Symptomatic root compression by a free fat transplant after hemilaminectomy. Case report. JOSE M. CABEZUDO, ALFREDO LOPEZ, and FERNANDO BACCI 633

Chronic spinal subdural hematomas. Report of two cases. V. K. KHOSLA, V. K. KAK, and S. N. MATHURIYA 636

Intraventricular hemorrhage in a term neonate secondary to a third ventricular AVM. Case report. MICHAEL D. HEAFNER, C. C. DUNCAN, E. L. KIER, L. R. MENT, D. T. SCOTT, R. KOLASKI, and C. SORGEN 640

Neoplastic cerebral aneurysm from metastatic gestational choriocarcinoma. Case report. MICHAEL PULLAR, PETER C. BLUMBERGS, GAEL E. PHILLIPS, and PAUL G. CARNEY 644

BOOK REVIEWS 648

NEUROSURGICAL FORUM: Letters to the editor 654

NOTICES 656

Journal of Neurosurgery

November 1985, Volume 63, Number 5

REVIEW ARTICLE: **Eicosanoids in the central nervous system.** J. B. LESLIE, and W. D. WATKINS 659

CLINICAL ARTICLES:

Astrocytomas of the spinal cord in children and adolescents. R. REIMER, and B. M. ONOFRIO 669

Treatment of neoplastic epidural cord compression by vertebral body resection and stabilization. N. SUNDARESAN, J. H. GALICICH, J. M. LANE, M. S. BAINS, and P. MCCORMACK 676

Aneurysmal bone cysts of the spine. Report of 17 cases. N. O. AMELI, K. ABBASSIOUN, H. SALEH, and A. ESLAMDOOST . 685

Chronic subdural hematoma presenting as spontaneous subarachnoid hemorrhage. Report of six cases. Z. KOTWICA, and J. BRZEZIŃSKI 691

CLINICAL RESEARCH:

Effect of perioperative platelet inhibition on postcarotid endarterectomy mural thrombus formation. Results of a prospective randomized controlled trial using aspirin and dipyridamole in humans. J. M. FINDLAY, W. M. LOUGHEED, F. GENTILI, P. M. WALKER, M. F. X. GLYNN, and S. HOULE 693

Dipyridamole and postoperative ischemic deficits in aneurysmal subarachnoid hemorrhage. M. D. M. SHAW, P. M. FOY, M. CONWAY, J. D. PICKARD, P. MALONEY, J. A. SPILLANE, and D. W. CHADWICK 699

Methylprednisolone and neurological function 1 year after spinal cord injury. Results of the National Acute Spinal Cord Injury Study. MICHAEL B. BRACKEN, MARY JO SHEPARD, KAREN G. HELLENBRAND, *et al* 704

Steroid administration and nitrogen excretion in the head-injured patient. C. S. ROBERTSON, G. L. CLIFTON, and J. C. GOODMAN 714

Immunobiology of primary intracranial tumors. Part 10: Therapeutic efficacy of interferon in the treatment of recurrent gliomas. M. S. MAHALEY, JR., M. B. URSO, R. A. WHALEY, M. BLUE, T. E. WILLIAMS, A. GUASPARI, and R. G. SELKER .. 719

Reduced systemic drug exposure by combining intra-arterial chemotherapy with hemoperfusion of regional venous drainage. E. H. OLDFIELD, R. L. DEDRICK, R. L. YEAGER, W. C. CLARK, H. L. DEVROOM, D. C. CHATTERJI, and J. L. DOPPMAN 726

Immunohistochemical study of placental alkaline phosphatase in primary intracranial germ-cell tumors. J. SHINODA, Y. MIWA, N. SAKAI, H. YAMADA, H. SHIMA, K. KATO, M. TAKAHASHI, and K. SHIMOKAWA 733

Comparison of computerized tomographic and radionuclide methods in determining intracranial cystic tumor volumes. L. D. LUNSFORD, G. LEVINE, and L. W. GUMERMAN 740

Behavior of an extradural pressure monitor in clinical use. Comparison of extradural with intraventricular pressure in patients with acute and chronically raised intracranial pressure. M. P. POWELL, and H. A. CROCKARD 745

Anterior cervical interbody fusion with threaded cylindrical bone. J. M. OTERO VICH 750

LABORATORY INVESTIGATIONS:

Centrocentral anastomosis in the prevention and treatment of painful terminal neuroma. An experimental study in the rat. J. GONZÁLEZ-DARDER, J. BARBERÁ, M. J. ABELLÁN, and A. MORA 754

Acute effect of glycerol on net cerebrospinal fluid production in dogs. H. Y. ZOGHBI, S. OKUMURA, J. P. LAURENT, and M. A. FISHMAN 759

Immunoregulatory role in gamma interferon production by a T cell growth factor-dependent experimental malignant glioma-specific cytotoxic T lymphocyte clone. T. YAMASAKI, H. HANDA, J. YAMASHITA, Y. WATANABE, M. TAGUCHI, S. KUWATA, Y. NAMBA, and M. HANAOKA 763

Carotid artery end-to-end anastomosis in the rat using the argon laser. S. PRIBIL, and S. K. POWERS 771

Neuronal effects of experimentally induced hydrocephalus in newborn rats. J. P. MCALLISTER II, T. A. MAUGANS, M. V. SHAH, and R. C. TRUEX, JR. 776

Glycerol neurolysis: neurophysiological effects of topical glycerol application on rat saphenous nerve. K. J. BURCHIEL, and L. C. RUSSELL 784

CASE REPORTS AND TECHNICAL NOTE:

Spasmodic torticollis due to neurovascular compression of the 11th nerve. Case report. C. A. PAGNI, M. NADDEO, and G. FACCANI 789

CT demonstration of spontaneous internal carotid artery dissection. Case report. D. J. LUBBERS, and T. A. TOMSICK .. 792

Treatment of ophthalmofacial-hypothalamic arteriovenous malformation (Bonnet-Dechaume-Blanc syndrome). Case report. M. K. MORGAN, I. H. JOHNSTON, and M. DE SILVA 794

Cystic cavernous angiomas of the posterior fossa. Report of three cases. C. BELLOTTI, M. MEDINA, G. OLIVERI, S. BARRALE, and F. ETTORRE 797

Subdural meningioma of spinal cord. Case report. D. A. CARTER, D. W. ROWED, and A. J. LEWIS 800

Turcot syndrome (glioma polyposis). Case report. U. M. CHOWDHARY, D. H. BOEHME, and M. AL-JISHI 804

Pleomorphic xanthoastrocytoma with 18-year survival. Case report. L. PALMA, A. MALECI, N. DI LORENZO, and G. M. LAURO 808

Frontal sinus approach to the orbit. Technical note. A. R. T. COLOHAN, J. A. JANE, S. A. NEWMAN, and W. W. MAGGIO 811

BOOK REVIEWS 814

NEUROSURGICAL FORUM: **Letters to the editor** 816

NOTICES 820

Journal of Neurosurgery

December 1985, Volume 63, Number 6

CLINICAL ARTICLES:

Transsphenoidal surgery following unsuccessful prior therapy. An assessment of benefits and risks in 158 patients. E. R. LAWS, JR., N. C. FODE, and M. J. REDMOND ... 823

Acute brain edema in fatal head injury: analysis by dynamic CT scanning. E. YOSHINO, T. YAMAKI, T. HIGUCHI, Y. HORIKAWA, and K. HIRAKAWA ... 830

Intact arch spondylolisthesis. A review of 50 cases and description of surgical treatment. E. ALEXANDER, JR., D. L. KELLY, JR., C. H. DAVIS, JR., J. M. MCWHORTER, and W. BROWN ... 840

Anterior osteophytectomy for cervical spondylotic myelopathy in developmentally narrow canal. S. KADOYA, T. NAKAMURA, R. KWAK, and G. HIROSE ... 845

Presentation of central nervous system sarcoidosis as intracranial tumors. W. C. CLARK, J. D. ACKER, F. C. DOHAN, JR., and J. H. ROBERTSON ... 851

Transpetrosal approach for aneurysms of the lower basilar artery. T. KAWASE, S. TOYA, R. SHIOBARA, and T. MINE ... 857

CLINICAL RESEARCH:

Chiasmatic optic glioma treated with chemotherapy. A preliminary report. J. G. ROSENSTOCK, R. J. PACKER, L. BILANIUK, D. A. BRUCE, J. L. RADCLIFFE, and P. SAVINO ... 862

The morphology of cerebrospinal fluid drainage pathways in human arachnoid granulations. M. L. UPTON, and R. O. WELLER ... 867

The rationale and methodology for intra-arterial chemotherapy with BCNU as treatment for glioblastoma. F. H. HOCHBERG, A. A. PRUITT, D. O. BECK, G. DEBRUN, and K. DAVIS ... 876

Oligodendroglioma: incidence and biological behavior in a defined population. S. J. MØRK, K. F. LINDEGAARD, T. B. HALVORSEN, E. H. LEHMANN, T. SOLGAARD, R. HATLEVOLL, S. HARVEI, and J. GANZ ... 881

Assessment of intracranial hemodynamics in carotid artery disease by transcranial Doppler ultrasound. K. F. LINDEGAARD, S. J. BAKKE, P. GROLIMUND, R. AASLID, P. HUBER, and H. NORNES ... 890

LABORATORY INVESTIGATIONS:

Beagle puppy model of perinatal cerebral infarction. Acute changes in regional cerebral prostaglandins during hemorrhagic hypotension. L. R. MENT, W. B. STEWART, C. C. DUNCAN, J. COLE, and B. R. PITT ... 899

Potentiation of vincristine effect in human and murine gliomas by calcium channel blockers or calmodulin inhibitors. K. KABA, E. TANI, T. MORIMURA, and T. MATSUMOTO ... 905

Establishment of a brain-tumor model in adult monkeys. K. TABUCHI, A. NISHIMOTO, K. MATSUMOTO, T. SATOH, S. NAKASONE, T. FUJIWARA, and H. OGURA ... 912

Effect of hematoporphyrin derivative photoradiation therapy on survival in the rat 9L gliosarcoma brain-tumor model. J. E. BOGGAN, C. BOLGER, and M. S. B. EDWARDS ... 917

Immunohistochemical investigation of cerebral ischemia during recirculation. T. YOSHIMINE, K. MORIMOTO, J. M. BRENGMAN, H. A. HOMBURGER, H. MOGAMI, and T. YANAGIHARA ... 922

Effects of verapamil and diltiazem on acute stroke in cats. M. W. ROY, R. J. DEMPSEY, K. L. MEYER, D. L. DONALDSON, P. A. TIBBS, and A. B. YOUNG ... 929

Cerebrovascular effects of hypocapnia during adenosine-induced arterial hypotension. D. J. BOARINI, N. F. KASSELL, J. A. SPROWELL, J. J. OLIN, and H. C. COESTER ... 937

Cerebral effects of isovolemic hemodilution with a hypertonic saline solution. M. M. TODD, C. TOMMASINO, and S. MOORE ... 944

Delayed CSF lavage for arteriographic and morphological vasospasm after experimental SAH. E. ALEXANDER III, P. MCL. BLACK, T. M. LISZCZAK, and N. T. ZERVAS ... 949

Evaluation of the risks of anticoagulation therapy following experimental craniotomy in the rat. K. L. SCHAIBLE, L. J. SMITH, R. G. FESSLER, J. R. RACHLIN, F. D. BROWN, and S. MULLAN ... 959

CASE REPORTS AND TECHNICAL NOTES:

Cerebral amyloid angiopathy presenting as transient ischemic attacks. Case report. D. B. SMITH, M. HITCHCOCK, and P. J. PHILPOTT ... 963

Intracerebral hemorrhage due to cerebral amyloid angiopathy. Case report. N. ROOSEN, J. J. MARTIN, C. DE LA PORTE, and M. VAN VYVE ... 965

Mucocele of the pterygoid recess treated by laser surgery. Case report. J. E. WILBERGER, JR., A. ABLA, J. KENNERDELL, and J. C. MAROON ... 970

Spontaneous reduction in size of prolactin-producing adenoma after delivery. Case report. M. FUJIMOTO, E. YOSHINO, N. MIZUKAWA, and K. HIRAKAWA ... 973

Intrasellar cysticercosis. Case report. H. RAFAEL, and S. GÓMEZ-LLATA ... 975

Diagnosis of subdural hemorrhage *in utero*. Case report. W. C. HANIGAN, M. B. ALI, T. J. CUSACK, T. C. MILLER, and J. J. SHAH ... 977

Biocompatibility analysis of the Sundt-Kees booster clip and the Drake aneurysm clip. Technical note. R. E. ANDERSON, A. M. BOWRON, and T. M. SUNDT, JR. ... 980

A guide for ventricular catheter placement. Technical note. J. B. G. GHAJAR ... 985

BOOK REVIEWS ... 987

NEUROSURGICAL FORUM: Letters to the editor ... 991

NOTICES ... 998

INDEX TO VOLUME 63 ... 1001